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## NOTICE OF ALLOWANCE AND FEE(S) DUE

41505

7590

11/25/2008

WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)  
CIRA CENTRE, 12TH FLOOR  
2929 ARCH STREET  
PHILADELPHIA, PA 19104-2891

EXAMINER

WANG, RONGQIA PHILIP

ART UNIT

PAPER NUMBER

2191

DATE MAILED: 11/25/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,624	02/10/2004	Azeemullah Khan	MSFT-2949/307005.01	1533

TITLE OF INVENTION: SQL SERVER DEBUGGING

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	02/25/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE** OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** **Mail** **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
**or Fax** **(571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

41505 7590 11/25/2008  
**WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)**  
**CIRA CENTRE, 12TH FLOOR**  
**2929 ARCH STREET**  
**PHILADELPHIA, PA 19104-2891**

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nonprovisional	NO	\$1510	\$300	\$0	\$1810	02/25/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
WANG, RONGFA PHILIP	2191	717-124000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/775,624

02/10/2004

Azeemullah Khan

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WANG, RONG/A PHILIP

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PHILADELPHIA, PA 19104-2891

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 677 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 677 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

# Notice of Allowability

Application No.

10/775,624

Examiner

PHILIP WANG

Applicant(s)

KHAN ET AL.

Art Unit

2191

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 8/26/2008.
2. ☒ The allowed claim(s) is/are 1,5,7-13,15-21 and 23-33.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

#### **DETAILED ACTION**

1. This office action is in response to amendment filed on 8/26/2008.
2. The 35 U.S.C. § 101 rejections of claims 1, 5-10, 19-26, and 32-33 are withdrawn in view of the Applicant's amendment to the claims.
3. The 35 U.S.C. § 112 2<sup>nd</sup> paragraph rejections of claim 11-18 and 19-23 are withdrawn in view of the Applicant's amendment.
4. Claim objections to claims 22 and 23 are withdrawn in view of the Applicant's amendment.
5. Per Applicant's request, claims 6, 14, and 22 are cancelled.
6. Claims 1, 5, 7-13, 15-21, and 23-33 are allowed.

#### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Joseph F. Oriti (Reg. No. 47,835) on November 20, 2008 to obviate any potential issues and to put the claims in condition for allowance.

7. The application has been amended as follows:  
  
1. (Currently Amended) A software architecture comprising at least one computer readable storage medium storing computer executable instructions for debugging a distributed database application process on a client connection, the software architecture comprising:

a server, wherein the server runs the distributed database application on a computer;

a client, wherein the client interacts with the distributed database application by way of the client connection; and  
the client connection executes managed code hosted by the distributed database application;

a debugger, wherein the debugger debugs the distributed database application process, and

an application program interface (API), wherein the API receives a debugger request, via a call for a stored procedure, from the debugger, to debug managed code, and causes the server to call a debugging component, and wherein the debugger debugs the managed code and wherein the API further detects a transition between Transact-Structured Query\_ Language (T-SQL) and managed code and calls a method to communicate the transition to the debugger.

11. (Currently Amended) A method of communicating between a server process, a client process and a debugger process in a distributed database environment, the method comprising:

receiving a first call for a stored procedure from the debugger process to debug managed code;

returning an interface pointer to the debugger process responsive to the received first call;

receiving a second call for a register method from the debugger process, wherein the second call comprises a machine name, a process ID and an interface pointer;

detecting a client connection matching the machine name, process ID and interface pointer on the server process;

halting execution of the client connection on the server process responsive to said detection;

executing a third call, wherein the third call establishes operative communications between the debugger process and the client process; and

debugging the client process via an application program interface(API); ~~detecting~~  
wherein the API detects a transition between Transact-Structured Query\_ Language (T-SQL) and managed code on the client connection; and calling a method to communicate the transition to the debugger process.

19. (Currently Amended) A computer-readable storage medium having computer-executable instructions for performing a method of communicating between a server process, a client process and a debugger process in a distributed database environment, the method comprising:

receiving a first call from a computer for a stored procedure from the debugger process to debug managed code on a computer;

returning an interface pointer to the debugger process responsive to the received

Art Unit: 2191

first call;

receiving a second call from a computer for a register method from the debugger process, wherein the second call comprises a machine name, a process ID and an interface pointer;

detecting a client connection matching the machine name, process ID and interface pointer on the server process;

halting execution of the client connection on the server process responsive to said detection;

executing a third call, wherein the third call establishes operative communications between the debugger process and the client process; and

debugging the client process via an application interface (API); detecting, wherein the API detects a transition between Transact-Structured Query Language (T-SQL) and managed code on the client connection; and

calling a method to communicate the transition to the debugger process.

27. (Currently Amended) A method of initiating a debugging session between a debugger and a client connection on a server running a distributed database application, comprising:

specifying the client connection of managed code to be debugged by way of an API;

returning an interface pointer to the debugger by way of the API;

calling a register method, wherein the register method uses the interface pointer to detect the client connection associated with the interface pointer;

halting execution of the client connection;

enabling the debugger to debug the client connection by way of the server and the

API; ~~detecting~~ wherein the API detects a transition between Transact-Structured Query\_ Language (T-SQL) and managed code on the client connection; and calling a method to communicate the transition to the debugger.

32. (Currently Amended) A computer-readable storage medium having computer-executable instructions for performing a method of initiating a debugging session between a debugger and a client connection on a server running a distributed database application, the method comprising:

specifying the client connection having managed code to be debugged by way of an API loaded on a computer;

returning an interface pointer to the debugger by way of the API on the computer;

calling a register method, wherein the register method uses the interface pointer to detect the client connection associated with the interface pointer;

halting execution of the client connection; and

enabling the debugger to debug the client connection by way of the server and the

API; ~~detecting~~, wherein the API detects a transition between Transact-Structured Query\_ Language (T-SQL) and managed code on the client connection; and  
  
calling a method to communicate the transition to the debugger process.

-end of currently amended claims-

8. The following is an examiner's statement of reasons for allowance:

The cited prior art taken alone or in combination fail to teach the limitation "wherein the debugger debugs the managed code and wherein the API further detects a transition between Transact-Structured Query\_ Language (T-SQL) and managed code and calls a method to communicate the transition to the debugger.

" as similarly recited in independent claims 1, 11, 19, 27, and 32.

9. The closest cited prior arts, Al-Azzawe (USPTN 7,155,426), Meier et al. (USPTN 6,058,393) and Alpern (USPTN 7, 107, 578) disclose debugging managed code and T-SQL. However, they do not specifically disclose detecting transition between T-SQL and managed code calls as recited in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Wang whose telephone number is 571-272-5934. The examiner can normally be reached on Mon - Fri 8 - 44:00PM. Any inquiry of general nature or relating to the status of this application should be directed to the TC2100 Group receptionist: 571-272-2100.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191